EXHGM: EXpert HydroGeoMorphic Approach

US Army Corps of Engineers

Background

Wetlands-based project design is strengthened and enhanced by techniques that rapidly assess changing conditions at a functional level. The U.S. Army Corps of Engineer's Hydrogeomorphic Approach (HGM), was designed to evaluate and predict the capacity of a wetland to perform selected hydrological, bio-geochemical, and habitat functions. The HGM methodology is an objective and reliable accounting system that quantifies environmental effects in a well-documented fashion. The **EXpert HydroGeoMorphic Approach** (**EXHGM**) program provides an automated means to conduct HGM analyses in a Microsoft® Windows™ environment.

EXHGM Capabilities

EXHGM was developed using a customized Microsoft® Access© module to solve complex mathematical calculations and report the results in a clear and concise format. **EXHGM** determines the quality and quantity of a wetland's capacity to perform the necessary functions. **EXHGM**:

♦ Quantifies conditions using standard HGM techniques
♦ Incorporates a broad range of HGM regional guidebooks
♦ Processes large amounts of data quickly and efficiently
♦ Reduces computation time dramatically
♦ Adapts to regional variations
♦ Accommodates a variety of data file formats

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Software and Hardware Requirements

Software: Microsoft® Access© 2000 must be installed on the user's system to support the **EXHGM** database and graphical user interface. **EXHGM** can import and export data from Microsoft® Windows™- compatible software packages (e.g., Microsoft® Excel© and Access©, Lotus®1-2-3©, Corel® Quatro Pro©, etc.). Report documents generated in **EXHGM** can be directly transferred to Microsoft® Excel© and Word©.

Hardware: **EXHGM** was developed to operate on an Intel® 486 or Pentium® processor. Calculation times vary based upon file size. The user will need at least 4 MB of random access memory for installation and operation. Hard drive space requirements (necessary for file storage and processing) will be dependent on the size and scope of the analysis required. Large files may require over 8 MB of hard disc storage. A video graphics adapter monitor (or better) with 256 color (or better) graphics capabilities and a laser or ink jet printer with at least 300 dots per inch resolution are also required.

Status and Availability

The first version of **EXHGM** is available for beta testing. The **EXHGM** team is currently developing a suite of support documents (i.e., user guides and workbooks). For more information about the **EXHGM** software and opportunities to beta-test the **EXHGM** module, contact the POC's below.

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